

REMARKS

Reconsideration of this application is respectfully requested in view of the foregoing amendment and the following remarks.

The Applicant appreciates the Examiner's indication of allowable subject matter in claim 2.

By the foregoing amendment, claims 7, 9, 11, 13, 15, 17, 19, 21, 23, 25 and 27 have been canceled, and claims 1, 2 and 8 have been amended. The amendments to claims 1 and 8 correct informal errors of a typographical nature and do not change the scope of the claims. Claim 2 has been amended to include the subject matter of its base claim, claim 1, to thereby place claim 2 in condition for allowance. Thus, claims 1-6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26 and 28 are currently pending in the application and subject to examination.

In the Office Action mailed December 29, 2005, claims 1 and 3-6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,210,433 to Ohsawa et al. (hereinafter, "Ohsawa") in view of U.S. Patent No. 4,441,123 to Ochi (hereinafter, "Ochi"). Claims 8, 10, 12, 14, 16, 18, 20, 22 and 28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ohsawa in view of Ochi and further in view of U.S. Patent No. 5,274,250 to Miyake et al. (hereinafter, "Miyake"). Claims 24 and 26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ohsawa in view of Ochi, in further view of Miyake, and further in view of U.S. Patent No. 6,344,666 to Yamaguchi et al. (hereinafter, "Yamaguchi"). Claims 7, 9, 11, 13, 15, 17, 19, 21 and 27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ohsawa in view of

Miyake. Claims 23 and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ohsawa in view of Miyake and further in view of Yamaguchi. It is noted that claims 7, 9, 11, 13, 15, 17, 19, 21, 23, 25 and 27 have been canceled, and claims 1, 2 and 8 have been amended. To the extent the rejections and objection remain applicable to the claims currently pending, the Applicants hereby traverse these rejections and objection, as follows.

Claims 1, 3-6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26 and 28

Claims 1 and 3-6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ohsawa in view of Ochi, claims 8, 10, 12, 14, 16, 18, 20, 22 and 28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ohsawa in view of Ochi and further in view of Miyake, and claims 24 and 26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ohsawa in view of Ochi, in further view of Miyake, and further in view of Yamaguchi.

In rejecting independent claims 1 and 8, the Office Action asserts that Ohsawa discloses all of the limitations recited in claims 1 and 8, with the exception of the second column being shifted from the first column by a given amount in said given direction (recited in claims 1 and 8), and the use of a nonconductive light shielding film formed above the monolayer electrodes (recited in claim 8).

The Office Action asserts that Ochi cures the deficiencies that exist in Ohsawa with respect to claim 1 and that the combination of Ochi and Miyake cure the deficiencies that exist in Ohsawa with respect to claim 8. The Office Action further asserts:

[I]t would have been obvious to one of ordinary skill in the art to modify the Ohsawa device to include the use of the second column being disposed so as to be shifted from the first column by a given amount in said given direction as taught by Ochi in order to reduce moiré fringes...

Office Action, pp. 4 and 9.

When rejecting claims under 35 U.S.C. § 103, the Patent Office bears an initial burden of presenting a *prima facie* case of obviousness. As set forth in MPEP § 2142, three basic criteria must be met in order to establish a *prima facie* case of obviousness. First, the prior art reference must disclose or suggest all the claim features. Second, there must be some suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Finally, there must be a reasonable expectation of success. The disclosure or suggestion to make the claimed combination and the reasonable expectation of success must *both* be found in the prior art, and not based on Applicant's disclosure.

The Applicants respectfully submit that it would not have been obvious to one of ordinary skill in the art to have combined the references as suggested in the outstanding Office Action for at least the reasons set forth below.

Ohsawa discloses a solid state CCD imaging device having a plurality of photodiodes 14 arranged in column 22 and row directions. The CCD of Ohsawa includes charge transfer channels 16a, 16b, etc. disposed between adjacent photodiode columns 22, and monolayer electrodes 20 disposed between photodiode rows to cross the charge transfer channels 16a, 16b, etc. The monolayer electrodes 20 have predetermined gap sections Gv therebetween,

such that charges may be transferred along the charge transfer channels 16a, 16b, etc.

Ochi discloses a MOS type solid state imaging sensor having rows and columns of hexagonal-shaped pixels arranged in a pixel shift layout, so that the pixels overlap in both the vertical and horizontal directions. In the imaging sensor of Ochi, a photosensitive layer 2 is superimposed on a MOS transfer device 6, 7. The photosensitive layer 2 includes an upper transparent electrode 8 formed on a photosensitive layer 9, which is formed on a back electrode 10.

As noted above, the Office Action asserts that it would have been obvious to use the pixel arrangement of Ochi in the CCD imaging device of Ohsawa in order to eliminate moire fringes in Ohsawa.

However, the solid state imaging sensor of Ochi is of a MOS type, and the solid state imaging device of Ohsawa is a CCD. Ohsawa teaches keeping a gap G_v between adjacent transfer electrodes 20, whereas Ochi discloses a continuous electrode 8 formed over a continuous photosensitive layer 9 to form an array of pixels overlapping in both the horizontal and vertical directions, to thereby eliminate moiré fringes. Therefore, using the arrangement of Ochi in the imaging device of Ohsawa would eliminate the predetermined gap sections G_v in Ohsawa. Hence, the proposed combination would require a substantial reconstruction and redesign of the elements of Ohsawa as well as a change in the basic principle under which Ohsawa was designed to operate.

Moreover, using the pixel arrangement of Ochi in the imaging device of Ohsawa and eliminating the predetermined gap sections Gv in Ohsawa would render the device of Ohsawa unfit for its intended purpose.

If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. See In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)...

"If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious." In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)

The Applicant respectfully submits that the Office Action has not set forth a proper motivation or suggestion to combine Ochi and Ohsawa. Accordingly, the Applicant submits that, at least for this reason, the proposed combination of Ohsawa and Ochi, and any rejections based thereon, is improper. As such, withdrawal of the rejections of claims 1, 3-6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26 and 28 under 35 USC § 103(a) as being unpatentable over the combination of Ohsawa and Ochi is respectfully requested.

Claim 2

Claim 2 has been amended to be in independent form including all of the subject matter of its base claim. As such, claim 2 is in condition for allowance and a notice to such effect is respectfully requested.

Conclusion


For all of the above reasons, it is respectfully submitted that claims 1-6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26 and 28 are in condition for allowance and a Notice of Allowability is earnestly solicited.

Should the Examiner determine that any further action is necessary to place this application into better form, the Examiner is invited to contact the undersigned representative at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicant hereby petitions for an appropriate extension of time. The Commissioner is hereby authorized to charge any fee deficiency or credit any overpayment associated with this communication to Deposit Account No. 01-2300 referencing client matter number 108235-00001.

Respectfully submitted,

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